ABSTRACT

A method of assembling a motor comprising assembling the shaft and thrust plate to be used in the fluid dynamic bearing assembly, and at least partially inserting the combined shaft and thrust plate into a sleeve which is adapted to support a hub which in turn may support one or more disks for rotation in a disc drive or similar environment. A counterplate cup of a generally U shaped or cup shaped design including a base which is substantially parallel to a top surface of the thrust plate, and sides of a diameter which is slightly greater than the diameter of the thrust plate and which are parallel to the thrust plate is provided, filled with oil, and having its open end facing the thrust plate.

Next the shaft and hub are pressed with the counterplate cup, the counterplate cup being pressed down over the end of the thrust plate so that the upraised sides of the cup fit easily over the ends of the thrust plate and can be pressed fit tightly over the upraised outer surface of the sleeve, tightly fitting the inside of the counterplate cup over the outside surface of the sleeve. During this press fit, the oil is pushed out of the region between the thrust plate upper surface and the counterplate cup bottom surface, and as the upraised sides of the cup fit over the outside of the sleeve, the oil fills the section between the lower surface of the thrust plate and the upper surface of the sleeve as well as the gap between the shaft and the surrounding sleeve.